

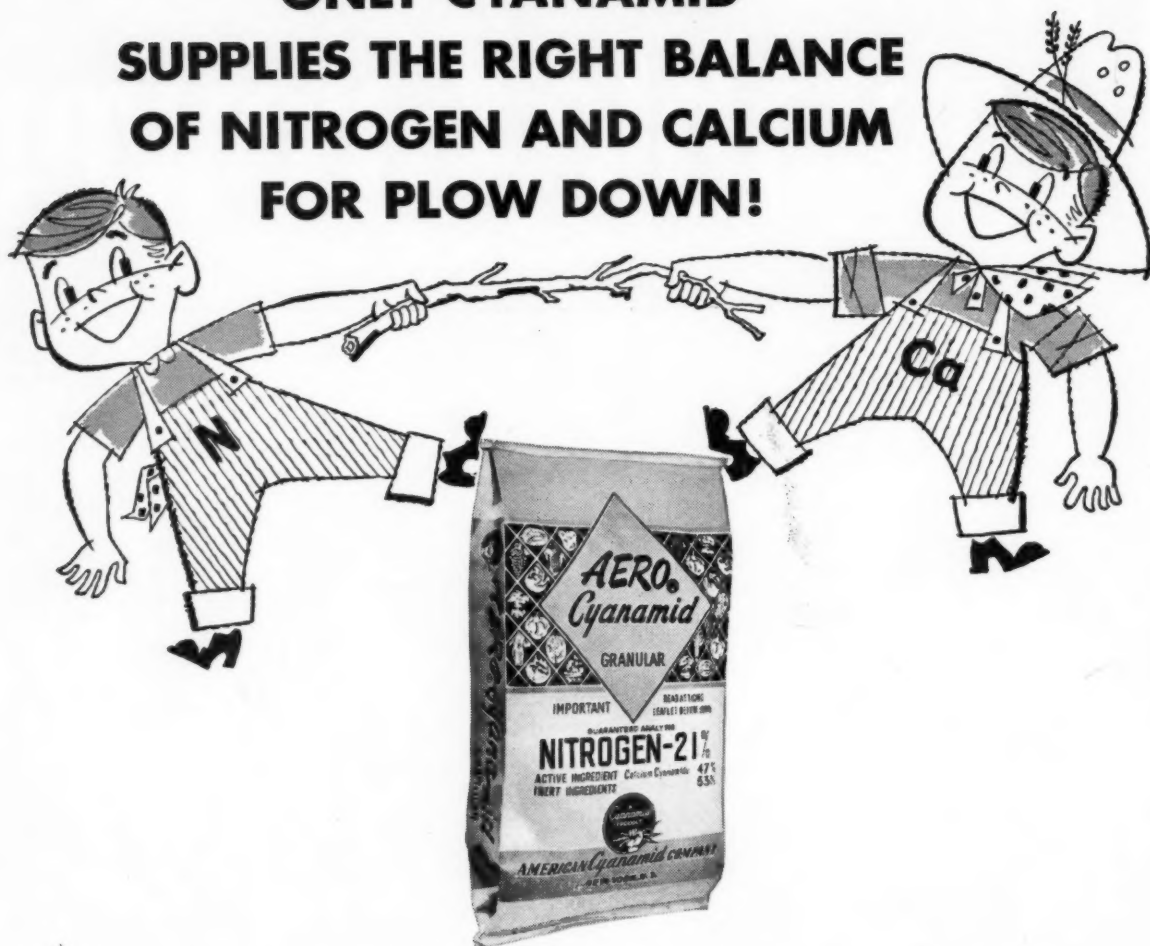
American **Vegetable Grower**

SEPTEMBER • 1955



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American VEGETABLE GROWER

REG. U. S. PAT. OFF.
(Commercial Vegetable Grower)

Vol. 3 September, 1955 No. 9

FEATURED IN THIS ISSUE

Cover photograph shows the Keystone No. 47 variety of celery. Courtesy Cornell Seed Co., St. Louis 2, Mo.

- Higher Yields with Anhydrous Ammonia** 5
By Joseph D. Campbell
- Streamlined Harvesting** 6
By Eldon S. Banta
- Ideas to Help You Increase Labor Output** 9
- Use a Magic Wand to Make Repairs.** 10
- Is "Bye, Bye Buyer" Your Theme Song?** 12
By Lloyd H. Davis
- Cushion Your Potato Digging** 13

DEPARTMENTS

- Letters to the Editor** 4
- State News** 8
- Know Your Vegetable Seeds** 8
- Answering Your Questions** 10
- Calendar of Coming Meetings and Exhibits** 14
- New for You** 16
- Editorial Page** 18

AMERICAN VEGETABLE GROWER

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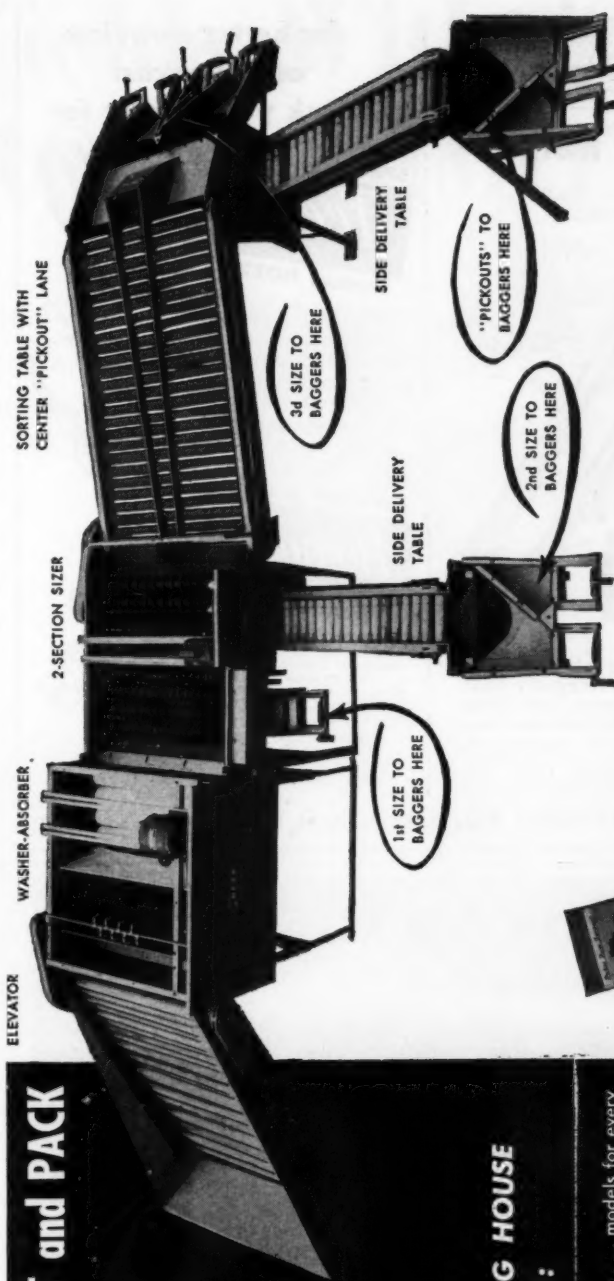
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SEPTEMBER, 1955



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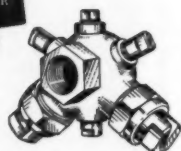
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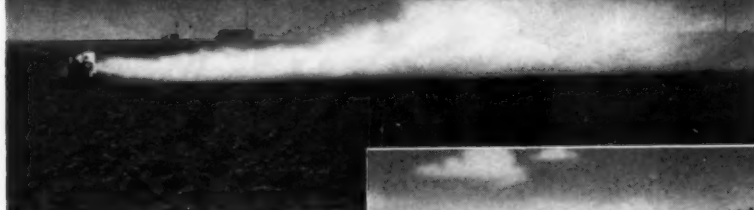
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LETTERS TO THE EDITOR

Used Tractors

Dear Editor:

In a recent issue I read your article on tractors and I thought your readers might be interested in how we check tractors when purchasing them on the used market.

First I operate the steering to detect wear in bearings and gears. Then I run the tractor over rough spots to determine if the parts are tight and the wheels are controllable. I check the generator while the engine is running; the ammeter should "charge" until the battery is up. The oil pressure should drop to normal as the engine warms.

I also look over the engine block for cracks or repaired cracks. When there is dirt or grime I clean it away from suspicious areas and the radiator for evidence of damage and repairs. I shake the front tires sideways to determine the condition of the wheel bearings and the amount of play.

The brakes are tested by locking one brake at a time and the clutch is tested by putting the tractor in gear and letting back on the clutch. The brakes should hold and the clutch should not slip or grab while the tractor turns.

Actually operating the tractor gives you a chance to listen for clicking in gears or excessive humming that indicates worn or broken parts. A leaky grease seal causes loss of grease, and although the seal itself is not costly, it takes time and labor for replacement. Check for all leaks.

Tire cuts are easily overlooked if care is not taken. Kick tires or roll wheels around for good inspection. Increase the load on the hydraulic mechanism to check operation of the pump. Then actually work the tractor under load to check the over-all operation.

I have found that dirty engine oil means lack of proper care or too much engine wear. Turn engine over by hand to test compression of each cylinder. If the engine turns easily, it might have poor rings or valves or both in all cylinders.

I check with the dealer of the particular make as he has a record of the serial numbers and the year the tractors were made.

Hammon, N. J. James Shoemaker, Jr.

Appreciative Subscriber

Dear Editor:

Enclosed is my subscription for three years which testifies that I appreciate the effort you are making to give us a good up-to-date and reliable magazine to help the dirt diggers feed the nation.

I have been a subscriber to AMERICAN FRUIT GROWER for years and believe you are on the road to giving us an equally good trade magazine for the vegetable grower.

Laclede, Mo.

Karl Jones

Vegetable Areas

Dear Editor:

Enclosed is 25 cents for the copy of AMERICAN VEGETABLE GROWER which describes the state of New Jersey in your current series of articles entitled "The Vegetable Areas of America." I read the interesting and informative coverage on Florida in the February, 1955, issue and noticed the Editor's Note on the previous feature on New Jersey.

Auburn, Wash.

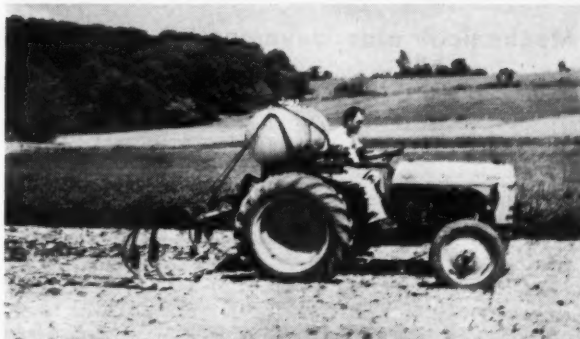
John P. Mahoney

AMERICAN VEGETABLE GROWER

Higher Yields With ANHYDROUS AMMONIA

A cheap source of nitrogen, this new fertilizer is widely used on West Coast, is now becoming popular in other areas

By JOSEPH D. CAMPBELL
Olin Mathieson Chemical Corporation



Robert Holter, of Farmers Co-operative, Middletown, Md., is shown applying anhydrous ammonia to sweet corn shortly after seedling emergence.

VEGETABLE growers for many years have led in the increased and more effective use of fertilizers. Higher labor costs have forced them to be constantly alert to laborsaving practices. This is one reason why they are becoming more interested in anhydrous ammonia (NH_3) fertilizer.

With smaller, more diversified acreages, eastern vegetable growers have not adopted this new fertilizer as rapidly as have West Coast growers, who have used anhydrous ammonia successfully for many years by applying it in the irrigation water.

What does ammonia do for plants? In New Jersey the application of 40 to 50 pounds of ammonia between the rows of snap beans just before the plants started their second growth increased yields by as much as 56 bushels per acre. Best results were obtained on broccoli, cabbage, collards, and chicory when the ammonia was applied one week after transplanting at about 12 inches from the row.

Onions treated with 30 to 40 pounds of ammonia between the rows two or three weeks after setting resulted in greater yields and excellent quality. A 50-pound application of ammonia 8 to 10 inches from the row on cucumbers and other vine crops was applied when the vines started to spread rapidly. This resulted in increased vine growth and additional setting of high quality fruit.

Much higher yields of tomatoes have also been experienced. In the case of varieties such as Rutgers,



Production on this New Jersey tomato field which received 50 pounds of ammonia per acre at time of blossom was 24.5 tons per acre, an increase of 9.4 tons over check plot which got none.

which tend to produce large vigorous plants, the use of ammonia sometimes has delayed maturity as much as 10 days, but it always has increased yield. In the case of varieties such as Garden State, which produce small plants, no delay in maturity occurred.

The use of anhydrous ammonia on sweet corn has given good results. One big advantage with this crop is that it matters little whether the ammonia is applied as a pre-plant application or when the plants are about a foot high, except on sandy soils.

The use of ammonia on peppers has given outstanding results. Growers from New Jersey to North Caro-

lina have reported that both quality and yield have been improved over those of other nitrogen sources.

Plants which are sensitive to salt injury should do better when anhydrous ammonia is used, since it is not a salt and salt injury or "fertilizer burn" cannot result.

It has been noted, especially in these recent dry years along the East Coast, that ammonia seems to give better results than solid nitrogen materials. Two reasons have been suggested. One is that because anhydrous ammonia has no salt effect it becomes easier for the roots to obtain the plant's water requirements. The other is that since the

(Continued on page 15)

STREAMLINED HARVESTING

Mechanical aids developed by Ohio's top sweet corn grower increase labor output, speed harvest

By **ELDON S. BANTA**



Neat job of corn topping is done by converted sprayer (see photo below). Two rows in center have been topped. Fields are topped just before picking to make job easier, faster.



John Bean corn sprayer was converted into corn topping machine. In place of spray boom the Smiths mounted a bank of three rotary cutters which top the corn just above the ears. Each cutter, or blade, is run by its own 1½ h.p. motor. Bank can be adjusted for height, depending on variety. Machine travels at 6 m.p.h., tops two rows at a time. Pickers follow the machine.

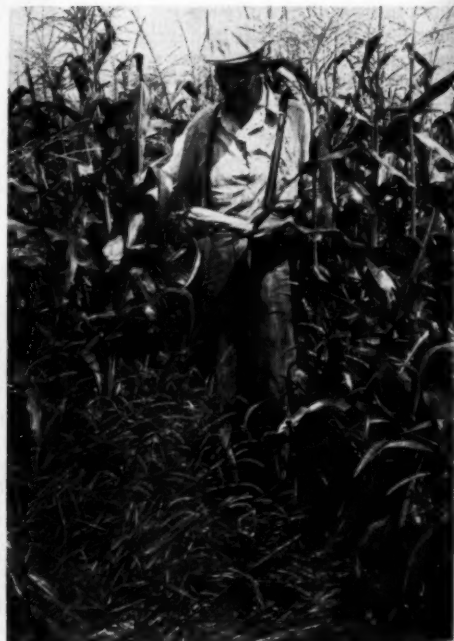
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ARTHUR L. SMITH, of Columbus, Ohio, many years ago acquired the title of Ohio's turnip king, because he grew so many fine turnips. He has recently followed through in like manner with corn and now is one of the top sweet corn growers in the nation.

How to harvest his quality corn quickly and get it to market in its "garden-fresh" state posed a particularly challenging problem to Smith and his son Lot. That they have successfully solved the problem, by combining experience and ingenuity, is shown in the photos on these two pages.

Their streamlined harvesting operations now make picking easier and faster, their help as a result is happier, and markets and consumers get a chilled, sweet product. Smith is one of the pioneers in the shipping of iced corn in bags, a method tried for the first time in Indiana in 1950 and this year being used extensively in numerous states including New York and New Jersey.

THE END



Arthur L. Smith proudly surveys an ear of his high-quality sweet corn. He believes speedy harvesting is as important as good land, proper fertilization, and insect and disease control in getting top-quality corn to consumer.

AMERICAN VEGETABLE GROWER

Smith rides of a John a small ga across field many rows. Belt Corp. Mfg. Co., by tractor

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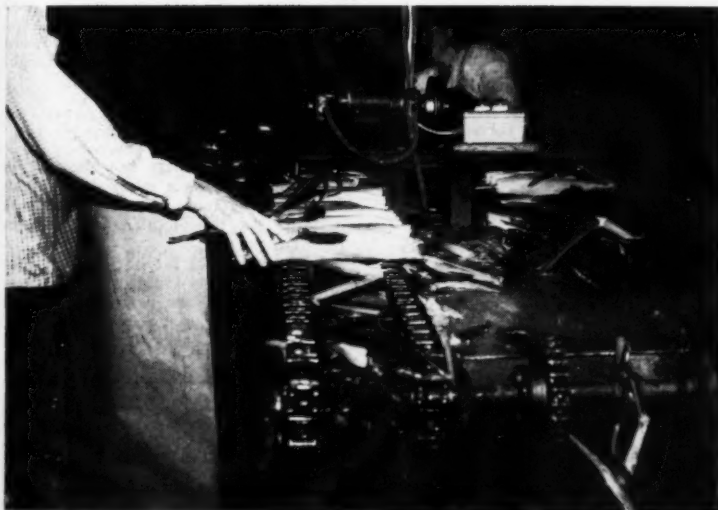
LE GROWER



Smith rides harvesting machine he and his son built (above). It consists of a John Deere Model D tractor and two conveyors, each driven by a small gasoline engine. Tractor was geared down to 1 1/2 m.p.h., crawls across field at pickers' pace. Working ahead of machine, 14 men pick as many rows. Ears are tossed onto Harvest Handler conveyor (made by Belt Corp., Orient, Ohio) at front, travel along rear conveyor (Palsgrove Mfg. Co., Canal Winchester, Ohio) to dump truck (not in photo) pulled by tractor. Pickers average 7,500 dozen ears per half-day.



Outside farm packing house (above), corn is dumped from truck into concrete pit, and sprayed with cold well water. This keeps corn sweet-tasting by retarding natural changes of corn's sugars to starches.



Corn is carried into packing house by conveyors from water pit. Cold running water keeps it cool during entire process. Before bagging, shanks are cut off with well-shielded trimmers (above) made from circular bench saws.



Corn is packed with ice in Multiwall bags and rushed to market the same day it's picked. Each bag holds five dozen ears of corn, 20 pounds of crushed ice. Smith was a pioneer in use of this type of package, made to his specifications by Union Bag & Paper Co. Bags read "Smith's Famous Sugar Corn Iced." Brand is recognized as a quality product. Wire ties are used.

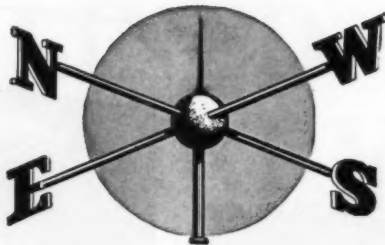


Time-saver in spraying operation is truck-mounted water tank and pump, used to fill sprayer in field. Nurse tank holds 1,000 gallons of water.



Weed sprays are applied to 25 acres of asparagus with sprayer built in farm shop. It consists of a Gravely garden tractor with 25-gallon tank mounted on shop-built trailer. A small rotary pump with two spray nozzles on each side is mounted on rear of tractor. One nozzle directs spray to base of plant, other hits area between rows; same on other side. Thus two rows and middle can be sprayed at rate of an acre per hour.

STATE



NEWS

- Red Color Gives Potatoes New, Rosy Look
- Field Days Prove Popular Way of Getting First-Hand Information

Seek Deeper Red Color

WISCONSIN—With Chicago buyers asking for better, deeper color on red potato varieties, several growers have treated Red Pontiac fields with 2,4-D to get better color. Later this season we will evaluate the 2,4-D treatment and its effect on tuber color.

Harvesting of the 1955 potato crop is well underway. While hot, dry weather in July hurt non-irrigated fields, particularly those on light, sandy soils, irrigated fields are returning good yields. Quality is good and growers are striving for better maturity.

The annual tour of Wisconsin Muck Farmers' Association was held July 30 at the Harold Gatzke Farm and the Leach Muck Farms near Berlin. At the Gatzke Farm growers saw a vacuum cooling plant in operation, head lettuce harvesting, and fields of onions, carrots, and other muck crops. At the Leach Farms, where nothing but celery is grown, they saw a modern celery washing and packing plant in operation. The Leaches planted 90 acres this year, and expect to have 300 to 400 acres of celery within a few seasons.

Mint is a rapidly expanding muck crop in this state. About 12 growers now produce over 2,000 acres of mint and are getting record yields of mint oil. The high cost of distilling equipment limits the minimum size of the planting. Most growers have several hundred or more acres and their own distilling equipment.—John A. Schoenemann, Ext. Spec. Veg. Crops, Madison.

ADD COLOR TO WAX

Most of the red potatoes grown in Florida are now waxed. The wax contains a water-soluble red coloring which intensifies the color of the tubers. Sale and consumption of these waxed potatoes increased four times in a short period of time. There is some controversy in the trade as to the desirability of adding color to the wax. Many housewives complain that the color comes out in the cooking water and stains utensils, as well as the hands. However, as long as sales are boosted by the colored waxing process, the potatoes will probably be colored.

Rains Reduce Tomato Crop

INDIANA—Four to five inches of rain has reduced the canning tomato crop by 9 per cent. Extreme heat is delaying fruit set; but vines are healthy, and prospects look good.

A seedless watermelon festival was held at Purdue University for 800 visitors. Roscoe Fraser, extension specialist, planned the affair. A small commercial acreage was planted in 1955 to the Japanese Seedless.—F. C. Gaylord, Sec'y, Lafayette.

New Bean Is Disease-Resistant

CALIFORNIA—A few years ago George Grant, San Bernardino County bean grower, found a healthy bean in a field badly hit by cowpea wilt disease. He multiplied the bean, and last month local growers

VGAA REPORT IS NOW AVAILABLE

International trade in fresh vegetables, greenhouse crops, processing, flowering in tomatoes, hybrids, chemical weeding, muck crop production, soil management, and culture and promotion of potatoes are among the subjects covered in the report of the 46th annual convention of Vegetable Growers Association of America held last December in Syracuse, N.Y. Growers who are not members of the association may obtain a copy of the report by sending \$2 to Joseph S. Shelly, Secretary, Vegetable Growers Association of America, 528 Mills Bldg., Washington 6, D.C.

got an official view of the new Grant black-eye bean. They saw it flourishing in diseased soil, while old varieties around it were yellow, sick failures.

The demonstration on the John Kropp ranch was made by county farm advisor George Bowman and Dr. Don Erwin, of the University of California. While the Grant bean is not resistant to nematodes, another big problem, it should give good yields where wilt makes blackeye number three or five fail.

Another grower, Jay Oliver, of Cucamonga, told of a high-producing new black-eye he found two seasons ago, and which he is now increasing.

Nixon Is Honored

PENNSYLVANIA—Dr. E. L. Nixon was honored at Potato City when friends dedicated a greenhouse in his name during the Field Days of the Pennsylvania Co-operative Potato Growers, Inc. Widely known to growers, he has devoted years of service as counselor for the Pennsylvania Chain Store Council. In his "retirement" he will direct experimental potato breeding work at Potato City.

More than 7,500 persons were on hand for the Field Days July 27-28. Mary Ann Kuhns, of Lehigh County, was crowned Potato Blossom Queen. She is the daughter of Mr. and Mrs. Harold Kuhns.

Effects of Hot Weather

MICHIGAN—Extremely hot weather in July was responsible for many diverse conditions in the vegetable situation. The mean temperature for the month was 7 degrees higher than normal.

Probable results of the hot weather: the best sweetpotato crop southwestern Michigan has ever had; the worst epidemic of mosaic in slicing and pickling cucumbers; larger melons with larger seed cavities; and

Know Your . . . VEGETABLE SEEDS

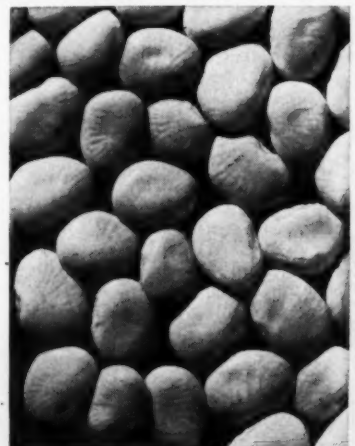
By VICTOR R. BOSWELL
U. S. Department of Agriculture

LIMA BEANS

ONE can always identify lima beans by the faint marks in the seed coat that radiate from the region of the "eye," or hilum, no matter what the size, shape, or color of the seed. No other kind of bean shows this character.

Production of seed lima beans has increased since World War II to keep pace with the increasing popularity of the processed product. Some 13 to 15 million pounds, roughly half the tonnage of snap bean seed, is grown annually. Like seed of snap beans, seed of lima beans is grown almost entirely west of the Rocky Mountains where the climate is favorable for harvesting and for avoiding infection with seed-borne diseases.

The large size and structure of the lima bean seed make it more susceptible to mechanical injury than other vegetable seeds. Long before such injury was recognized as serious in snap beans, thresher injury and the effects of extreme dryness were recognized in the lima bean. Mechanical injury is not always revealed by broken seeds or cracked seed coats, for damage can be done inside the seed without breaking the seed coat noticeably. Hard seed coats in the lima bean can be induced by excessive drying. Germination of such "hard" seeds may be delayed so much as to make them virtually worthless in the field although they are quite alive.



Low soil temperature makes lima bean seed very susceptible to decay; therefore planting should be deferred until the soil is warm. In cold soil that has been sterilized the seeds do not root but will grow normally when the soil temperature is raised to about 70° F.

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SEPTEMBER

poor color and quality of tomatoes—S. K. Ries, Dept. of Hort., East Lansing.

Pascal celery shippers report that movement has been very good this year, and believe that stepped-up advertising efforts have paid dividends.—Howard Trapp, Sec'y, Michigan Celery Promotion Assn., Beulah.

NEW HYBRID SPINACH

Seed of Early Hybrid 7, a new variety of spinach resistant to blue-mold and blight, will be available in limited quantity for planting this fall, the USDA has announced.

A cross between variety 99 x 95 and Virginia Savoy, it was developed by USDA and tested by Texas Agricultural Experiment Station. It is semi-compact, dark green, and upright, well-suited to machine harvesting. It develops quickly and bolts easily, so is not generally satisfactory as a spring crop. It should be planted in the fall when the cool, short days tend to suppress bolting and insure high yields.

In tests during 1953-54 in southern Texas and in Arkansas, the new variety yielded 13.5 to 19.6 tons per acre as a fall crop, 9.7 tons as a spring crop. Standard varieties yielded from 5.2 to 14.8 tons in the fall, 3.7 to 7.1 tons in the spring. The new hybrid is satisfactory for canning and freezing, and has been approved by some shippers for fresh shipping.

Promising New Potatoes

MINNESOTA—Several new potato varieties are being tested this summer in commercial potato-producing areas of the state. Three new varieties from Nebraska—Dazoc, Redglo, and Sheridan—appear very promising from the standpoint of good vine growth and excellent set of tubers. An early red potato, Dazoc is showing excellent market quality.

The Red Lasoda is creating a lot of interest as it appears to be one of the best in the plots. It is an early potato with excellent color, yield-ability, cooking and market quality. A new russet, Rushmore, seems to have good market and cooking quality, and appears better-suited to peat land than Early Gem.

Growers will get a chance to look over the 15 varieties, after they are harvested, at potato field days the week of September 26. Plots are located at Baker, Oslo, Kennedy, Aitken, Hollandale, and Osseo.

Our hats are off to Joe German, secretary of the St. Paul Growers' Association, for setting up the fine vegetable exhibits at the Minnesota State Fair and the Ramsey County Fair.—Orrin C. Turnquist, Sec'y, St. Paul.

ONE OF FOUR

One of the nation's Four Outstanding Young Farmers of 1955 is a Michigan cucumber grower, 35-year-old Alvin Hansen, of McBride. In 1946 Hansen purchased his 560-acre farm for \$40,000, with only \$3,000 down. Today he owns 620 acres, a nine-room ranch-type home, and has added many pieces of modern farm equipment. His farm, valued at \$250,000, was selected by Michigan State College as the site for a series of pickle variety, nitrogen, and weed control experiments. Hansen's cucumbers are sold to the H. J. Heinz Company.

Sweetpotato Prospects Good

KANSAS—Sweetpotato acreage, including new varieties such as Kandee, are doing well despite dry weather. Irrigation is being widely used.

Ralph and Fred Morse, at DeSoto, have had good returns from the New Hampshire Midget watermelon. Tomato growers are reporting good yields with Moreton Hybrid, Burpee's Hybrid A, and Fireball.—Wm. G. Amstein, Sec'y, Manhattan.

(Continued on page 14)

Ideas to Help You INCREASE LABOR OUTPUT

Growers are using these self-propelled machines and other mechanical harvesting means to help labor produce more



New type of lettuce field packing equipment used on Bardin Ranch, Salinas, Calif. Cutting crew works ahead of machine. Another crew follows, picking up heads. Cartons are stapled together (center) and placed on rack for packers. Packed cartons move by belt to truck (left).



Cucumber picker built by Joe Kalla, East Aurora, N.Y. Built on old auto frame, it is powered by 1½ h.p. motor geared down to slow speed, steered by arm behind cultivator furrow. Photo by J. H. Staby.



Field-packed carton is welcomed at Growers Cooler Co. by Mickey Musnich. Carton holds 24 heads of top-quality lettuce, arrives in good condition thanks to minimum handling, speedy operations. Photos by John U. Oberle.



Asparagus picking is a snap on Ed DeVries farm, DeMotte, Ind. Trailer (right) carries boxes, two pickers, is drawn by Allis-Chalmers Model G tractor. Granddaughter Judith drives tractor, while mother and friend pick.



Self-propelled lima bean viner (left) is cutting harvesting costs in California. Vines are cut and windrowed ahead of viner, which picks up plants, shells beans, and drops vines back onto field. Beans accumulate in bin, are delivered to dump truck for hauling to cleaner and precooling plant. Photo courtesy University of California.

Answering Your QUESTIONS

Don't let your questions go unanswered. Whether large or small, send them with a three-cent stamp for early reply to Questions Editor, AMERICAN VEGETABLE GROWER, Willoughby, Ohio.

NATRIN ON TOMATOES

What can you tell me about the use of natri- on field-grown tomatoes?—Maryland.

Natrin is an experimental herbicide manufactured by the Carbide and Carbon Chemical Co. in New York. It has been tested at a number of state experiment stations including Michigan where Dr. S. K. Ries has used it for two years on tomatoes with promising results.

This year it is being tested throughout the United States on small plots of tomatoes. If the chemical comes through the tests satisfactorily, it may be recommended for use in 1956.

Experiments are now being made to determine the best time of application and some of the factors influencing its effectiveness. To date, applications at lay-by are proving the most effective for tomato weed control.

The chemical name for this compound is sodium 2,4-5 trichlorophenoxyethyl sulfate. It is effective in controlling annual weeds in the process of germination.

WEED CONTROL

I would like to know if there is something I can put directly on my asparagus bed that will get rid of weeds but will not hurt the bed.—Missouri.

Use the herbicide known as CMU (sold by DuPont as Karmex W) at 1½ to 2 pounds per acre before spears emerge in the spring or after the cutting season. Best results have been achieved with 1½ pounds after disking in the spring and again after the cutting season.

CLICK BEETLE

Under separate cover I am sending an insect which I would like you to identify. Also, how can we control this insect?—Illinois.

We identified the insect as a click beetle. The larvae are known as wireworms. Wireworms are among the most difficult insects to control, and are the most destructive and widespread pests of corn, small grains, potatoes, and other root crops. Crops that are attacked often fail to germinate. The crop may not come up well, or may start well and become thin and patchy.

Economical wireworm control may be obtained by dusting the ground with DDT at 10 to 25 pounds per acre or with lindane at 0.2 to 1.6 pounds per acre, followed by thorough cultivation into the top soil. Smaller garden plots may be treated by evenly applying 8 to 16 ounces of 5 per cent DDT dust or 1 to 5 ounces of 1 per cent lindane dust to 100 square feet. The lindane treatment should be used with caution as it may cause an objectionable odor or taste in some crops.

POTATO AND ONION BAGS

Could you please tell me where I can get the 10- and 15-pound mesh bags commonly used for bagging potatoes and onions?—Wisconsin.

Small mesh bags can be obtained from Bemis Brothers Bag Co., 111 N. 4th St., St. Louis 2, Mo., and Chase Bag Co., 309 W. Jackson, Chicago 6, Ill.

EARLIER TOMATOES

Where can I purchase the hormone mentioned in your May issue for earlier ripening of tomatoes?—California.

Try Thompson Chemicals Corp., 3600 Monon St., Los Angeles 27, Calif.

10

USE A Magic Wand TO MAKE REPAIRS

Growers find electric welding is an easy way to save on repair bills and to build and remodel equipment

MANY vegetable growers consider their electric arc welders the most useful tool on the farm. They report great savings with their "magic repair wands." Others would like to have their own welding equipment, but feel the job of welding is too complicated to learn.

Welding is not difficult. Once the concepts of welding are understood the techniques can be quickly mastered. Manufacturers of arc welders, the most common type used on farms, supply purchasers with detailed instructions on how to use them. So you can quickly become just as good a welder as your neighbor.

Many a grower has recovered the price of his welder on a year's repair of machinery alone. Add to this the fact that he can use it to build and remodel equipment and you see he really has a valuable tool. With an arc welder you not only can weld but you can cut, braze, heat, and solder almost any kind of metal used on farms in either buildings or equipment. Most farm welders are of limited capacity, however, so don't expect to do some of the big jobs that can be done only with commercial welders.

AC or DC

You may be confronted with two general types of welders when considering a purchase. If you are going to do most of your welding in the shop, then the AC or alternating current type of transformer welder is suitable. This plugs into your electric line and generally operates at 230 volts, 180 amperes.

On the other hand, if you plan to use your welder in the field, an engine-driven welder may be more practical. The engine drives a generator which produces the current for the welder, which is classed as a DC or direct current welder.

To do a good job of welding and to protect yourself, you need insulated electrode holders, ground clamps and cable, a good head shield, gauntlet-type leather gloves, and sometimes hand shields.

For long and dependable use keep the welder clean and free from dust, moisture, and grease. Gloves should be free from grease and oil or they may catch fire during welding.



Photo courtesy Lincoln Electric Co.

Welding draw bar to trailer bed to make a two-wheeled trailer on vegetable farm near Erie, Pa. This grower is using an AC transformer type welder made by Lincoln Electric Co., 22801 St. Clair Ave., Cleveland 17, Ohio.

The Welding Process

The welding process is briefly this:

The electrode is a coated metal rod used to make the high temperature arc with the object being welded. The arc generates the heat which melts the metal of the rod and of the piece being welded. These fuse together, forming the weld. The electrode is coated with materials which, when burned during the welding process, protect the weld and insure a more perfect fusion of metal. Most, but not all electrodes are coated, depending upon the job in question.

Specific directions for welding procedure can be given only for the type of welder you are using and for the type of welding job undertaken. There are some general procedures which we can mention here which might clarify some of the potential difficulties in arc welding.

Keep These in Mind

Here are a few points to keep in mind when welding:

Fit-up—Make sure the two or more pieces you are welding fit closely together. The closer they fit, the better the welding job, and the less costly.

Joint position—Place points in such a position that you weld in a downward direction. A smoother, stronger weld is thus made.

Polarity—Always use a negative or positive electrode according to the

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manufacturer's recommendations. If switched, they do not weld properly.

Length of arc—Do not allow tip of electrode to be immersed in the molten pool. Keep the electrode slightly ahead of it. It is usually best to make a short arc for the first pass and longer arcs for succeeding ones.

Filling craters—Strike the arc just a little ahead of the crater, hesitate a moment, then move back and fill the crater.

Arc blow—This is uneven burning of the electrode due to magnetic forces on one side of electrode. To reduce this, direct tip of electrode opposite of the blow, and backstep. Place ground clamp as far from joint as possible.

Undercutting—This can be caused by too long an arc, or incorrect angle of electrode, excessive current, or too rapid movement of arc. Be sure to fill undercuts with weld metal.

Plates of unequal thickness—Hold electrode at angle so as to direct arc evenly on both pieces. The larger piece should receive a larger portion of the arc.

Travel speed—Keep the rod tip just ahead of the molten pool at all times.

Angle of electrode—Tip of electrode should be directed back toward

the finished portion of the weld. This will keep molten slag back so it will not interfere with the arc. THE END

New Use for Tomato Vines

A NEW medical use for tomato leaves and stems has been discovered by the USDA Agricultural Research Service at Wyndmoor, Pa. It is Tomatine—an antibiotic which is effective against fungi that cause certain skin diseases of humans and animals. It may also prove effective against many serious internal ailments.

Tomatine can also be the starting point in the manufacture of cortisone and certain sex hormones. An Argentine drug company has already begun commercial production of tomatine ointment.

NEW USDA BULLETIN ON SNAP BEANS

A new edition of the USDA bulletin, *Snap Beans for Marketing, Canning, and Freezing*, has just been published. It replaces a previous publication of the same title, and includes information on varieties and control of insects and diseases.

The publication was prepared by Dr. W. J. Zaumeyer, plant pathologist at the USDA Plant Industry Station, Beltsville, Md. A single copy of this new Farmers' Bulletin—No. 1915—may be obtained free by writing to the Office of Information, U. S. Department of Agriculture, Washington 25, D.C.

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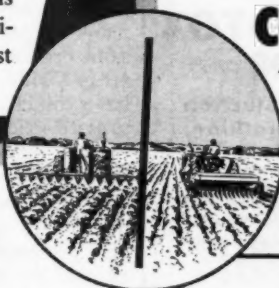
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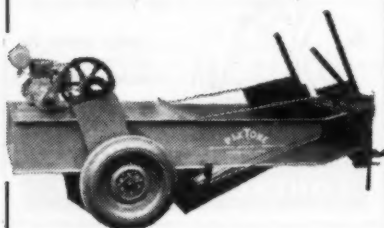
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IS "BYE, BYE BUYER" YOUR THEME SONG?

If you are a small grower with marketing problems, here's some advice on getting — and keeping — buyers

By **LLOYD H. DAVIS**
Cornell University

"THERE aren't so many buyers on the market any more. Where have they gone?" This question is frequently asked by small growers selling through regional or metropolitan farmers' markets. They are looking for ways to attract and keep buyers who will pay good prices for a volume of produce.

Chain store supermarkets, about 40 per cent of the retail food business, are a large factor in the fruit and vegetable market today. They are the main source of fresh fruits and vegetables for a very large part of the population. Independent stores, too, are getting larger—independent supermarkets are increasing by leaps and bounds. Roadside stands have become more popular.

Standardized Pack

Chain store buyers generally buy each vegetable where they can fill their needs with a good quality, standardized product. They want each package graded to known and reliable standards, each package in the load very much like the others. They may not insist on produce of top quality, but they must have confidence in the quality they buy.

Operators of independent stores and supermarkets are less likely to buy on farmers' markets than a few years ago. To obtain efficiency in their operations and meet competition they are likely to buy most fruits and vegetables from wholesalers whose buying practices tend to be like those of the chains.

Under these conditions you may find that during the peak season of local production for some vegetables many larger outlets are selling the same products shipped in from distant areas—while small local producers have difficulty finding buyers at depressed prices.

Co-operate to Sell

In the summer of 1953 a group of tomato producers near Albany, N.Y., recognized an opportunity to expand the market for their products by catering to the needs and desires of the wholesale buyers.

They agreed to pack tomatoes in a uniform package, avoiding the ¾-bushel basket criticized by many buyers. They also adopted uniform grade

standards equal to U.S. No. 1. Extension workers helped them learn the grade, and a market inspector employed by the Menands regional market checked their packages regularly to help them maintain the standards.

A special label was designed and used on all packages meeting these standards. Buyers were informed that this label indicated a good product of rather uniform quality. An extension worker from Cornell University obtained information on prices and product quality from co-operating farmers and others, to help evaluate the results.

These growers found that they could provide a rather uniform pack, even though each did the grading on his own farm. Their "No. 1" pack averaged only 5 per cent grade defect compared with 24 per cent among the regular No. 1 pack of other growers.

The standardized pack also sold for premium prices. During the first two weeks in August co-operating growers averaged \$2.57 per half bushel on the Menands Market while other tomato growers were receiving an average of \$1.97 for their No. 1's sold there. During the following two weeks the premium was nearly 50 per cent.

Prices measure only a part of the benefits. Co-operating farmers returned home with only 4 per cent of their pack unsold while non-co-operators went home with about 10 per cent of their No. 1's unsold. The objectionable ¾-bushel basket disappeared as a container for No. 1 tomatoes, as non-co-operating producers adjusted their marketing practices to meet the competition.

Other Outlets

Many small-scale vegetable growers can stay in business and make satisfactory incomes by servicing roadside markets, individual retail stores, and consumers directly. Frequently they are not able to get their products offered to consumers effectively in a substantial part of the local market. Yet they are not serving potential markets elsewhere because changes in the system of distribution have made it more difficult for them to reach these markets. Real opportunities are available for those who can find ways to satisfy these buyers and meet the competition from other sources of supply.

THE END

AMERICAN VEGETABLE GROWER

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CUSHION Your Potato Digging

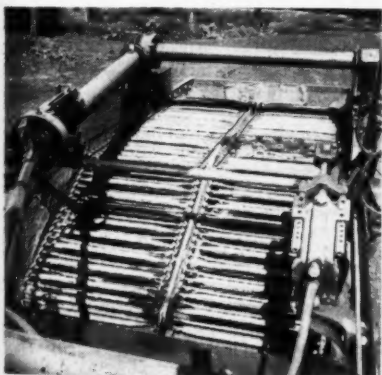
Rubber-covered digger chains
reduce bruising to a minimum

MANY of the potato cuts and bruises that occur in harvesting can be eliminated by proper operation of the digger. This will include proper depth of the blade, speed of chain, degree of separation depending upon soil type and soil moisture, and padding of rear wings in the case of the double row digger. Yet despite these precautions, bruises occur on the digger chain.

Many growers have covered their digger chains with rubber tubing. But C. A. Basquin and his son, Jack, of Big Prairie, Ohio, went a step further. They are now molding rubber on the digger chains. At first they tried using rubber tubing but had difficulty in locating just the right kind of rubber. When they put it on the links, it would sometimes stretch too much and dirt would collect between the tubing and the digger chain links. Besides, the thinness of the tubing offered very little cushion.

Rubber Is Molded on Chain

The Basquins are now molding to the digger chain a soft, resilient rubber which has lasted the life of the digger chain. The molded rubber remains in place and cannot shift. Therefore they are able to vary the



Potato digger with rubber molded on links to prevent bruising. Above digger chain has been used on over 125 acres; rubber is still good.

thickness of the rubber so that it will be thicker where greater protection is needed.

This also helps for better separation of soil and potatoes on the digger chain, since the rubber can be quite thin on sides of the link where potatoes do not come in contact. The top part of the link where most of the bruising occurs is covered with thicker rubber.

Experimental work with the rubber-covered chains has shown that hard bruises can be reduced from 15 per cent on regular steel chains to as little as 2 per cent on chains covered with rubber. Such reductions mean many dollars to the producer, and better potatoes for the consumer.

Basquins have now formed an organization to do the job for other growers. It is the Basman Company, Box 85, Big Prairie, Ohio.—E. C. Wittmeyer, Ohio State University.

Plastic Greenhouses Need Air

GROWERS of vegetables in plastic greenhouses are advised to make sure plenty of air is admitted into the greenhouse. Dr. E. M. Emmert, of the University of Kentucky, points out that plastic keeps the humidity too high unless exchange of air is accomplished and correct temperature maintained.

Tomatoes were larger in plastic houses in experiments conducted by Dr. Emmert at the Kentucky Experiment Station. When the air exchange was slow, however, there was a tendency toward rotting. Blights were no worse in the plastic house, but there was a tendency for more leaf mold.

The plastic greenhouse represents a major step in low-cost production of greenhouse vegetables. An 18x34-foot plastic house can be built for \$250, and overhead and heating costs are lower than in glass houses. For a set of building plans and instructions, send 25 cents in coins or stamps to AMERICAN VEGETABLE GROWER, Willoughby, Ohio.

Fusarium wilt occurred in the station's glass house, but not in the plastic, and there was more tendency for blossom-end rot in the glass house.

Kentucky Wonder beans grew vigorously in the plastic house, but there was some tendency for them to vine and not set pods, especially if the concentration of nitrogen in the soil was high. A good set was obtained when plenty of air was admitted and temperatures were maintained at 60° F. or more.

Bibb lettuce produced extra large, solid heads in much shorter time than usual, and quality was good. Grand Rapids leaf lettuce, eggplants, peppers, cucumbers, beans, and cabbage also grew vigorously in the low-cost plastic greenhouse.

Potato growers who would like to crash the attractive potato chip market, which last year bought 32 million bushels of potatoes, should get a copy of the new pamphlet, "How to Grow and Store Potatoes for the Chip Industry." Available from the National Potato Chip Institute, 1360 Hanna Bldg., Cleveland 15, Ohio, it is written by the institute's director of research, Dr. Ora Smith, of Cornell University.

BETTER VEGETABLE BOXES From WABASH



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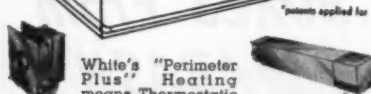
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CORONATION AT CORNELL

Homer Thompson, professor emeritus at Cornell University and former head of the Vegetable Crops Department, gazes fondly upon New York Vegetable Queen Virginia Magrum, whom he crowned at Cornell's Vegetable Field Day August 13. The 21-year-old queen is the daughter of vegetable growers Albert and Cecelia Magrum, of Wilson, and helps out on the family farm where tomatoes, sweet corn, cabbage, and broccoli are grown.

STATE NEWS

(Continued from page 9)

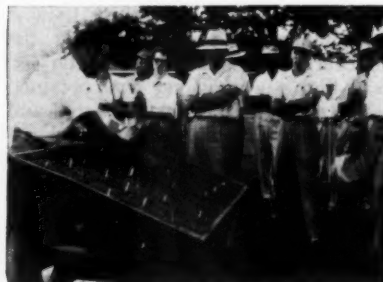
Potato and Onion Days Popular

NEW YORK—More than 10,000 persons were in Bridgewater August 4 for 22nd annual Potato Field Day, according to Phil Luke, of Fulton, president of the Empire State Potato Club. The program, under the chairmanship of Prof. M. W. Meadows, of Cornell University, featured experimental plots—some treated with antibiotics, others showing the effects of seed-borne virus diseases. Hosting farmers included "Skip" Wrobel, Steve Lonchek, Tony Juwaski, and Art Simmons.

Orange County was transformed into old Poland as some 7,000 spectators helped celebrate the fourth Orange County Onion Harvest Festival August 15. The program, complete with folk music, dances, and costumes, followed the traditional Polish harvest celebration. Geraldine Zalonski, of Durlandville, was crowned festival queen, and Mayor Robert F. Wagner, of New York City, was featured speaker. Orange County is one of the nation's leading muck onion producing sections.

Truck Crops Field Day

MISSISSIPPI—An interesting and profitable day was spent by vegetable growers who attended the annual Field Day held recently at the Truck Crops Experiment Station at Crystal Springs.



Hollis E. Quimby, head of soil-testing laboratory at Mississippi Truck Crops Experiment Station, Crystal Springs, explains methods of taking soil samples to growers at Field Day.

Of special interest were plots showing response of tomatoes, sweet corn, sweet-potatoes, peppers, and snap beans to irrigation. The station conducted the first irrigation research in the state, under the direction of Dr. John A. Campbell, station superintendent. As a result of these tests, more than 2,000 acres of commercial truck crops in Copiah County alone are now being irrigated.

CALENDAR OF COMING MEETINGS AND EXHIBITS

Sept. 6-8—American Society for Horticultural Science annual meeting, Michigan State University, East Lansing.—Geo. M. Kessler, Press Representative, East Lansing.

Sept. 9-10—Canada's 1st National Tomato Festival, Leamington, Ont.—Jack Wilcox, Room 1606, 111 Richmond West, Toronto, Ont.

Sept. 19-21—Texas Citrus and Vegetable Growers and Shippers, Inc., Shamrock Hotel, Houston.—Austin E. Anson, Exec. Mgr., 306 E. Jackson, Harlingen, Tex.

Oct. 4-6—Florida Fruit & Vegetable Association annual convention, Hotel Fontainebleau, Miami Beach.—Geo. Talbott, P. O. Box 6787, Orlando.

Oct. 9-11—Produce Packaging Association, 1955 Convention and Exposition, Conrad Hilton Hotel, Chicago, Assn. hdqtrs: 500 Fifth Ave., New York 36, N.Y.

Oct. 10—South Carolina Fresh Fruit and Vegetable Association annual convention, Hotel Wade Hampton, Columbia.—B. I. Raybon, sec'y, Unit 55B, State Farmers Market, Columbia.

Nov. 1-3—Florida State Horticultural Society 67th annual meeting, Fort Harrison Hotel, Clearwater.—Ernest L. Spencer, Sec'y, Bradenton.

Nov. 2-3—Wisconsin State Potato Show, Antigo High School Gym and Civic Center, Antigo.—Harold R. Simons, Exec. Sec'y, Fidelity Bank Bldg., Antigo.

Nov. 8—Greenhouse Section meeting, Indiana State Vegetable Growers Association, Horticultural Bldg., Purdue University, Lafayette.—F. C. Gaylord, Sec'y, Dept. of Hort., Lafayette.

Nov. 16-18—Western Growers Association convention, Westward Ho Hotel, Phoenix, Ariz. Association headquarters: 606 S. Hill St., Los Angeles 14, Calif.

Nov. 29-30—Illinois State Vegetable Growers Association annual meeting, Des Plaines.—Arthur Selme, Sec'y, R. 2, Rock Falls.

Dec. 1-2—Iowa State Vegetable Growers' Association 42nd annual convention, Hotel Hartford, Mason City.—C. L. Finch, Sec'y, Ames.

Dec. 1-2—Kansas State Horticultural Society annual meeting, Kansas State College, Manhattan.—W. G. Amstein, Sec'y, Manhattan.

Dec. 5-8—Vegetable Growers Association of America 47th annual convention, Sheraton-Park Hotel, Washington, D. C.—Joseph S. Shelly, Sec'y, 528 Mills Bldg., Washington 6, D. C.

Dec. 11-15—National Junior Vegetable Growers Association, 21st annual convention, Jung Hotel, New Orleans, La.—Prof. Grant B. Snyder, 103 French Hall, U. of Massachusetts, Amherst.

Jan. 30-Feb. 2, 1956—United Fresh Fruit and Vegetable Association annual meeting, Hotel Roosevelt, New Orleans, La. Association headquarters: 777 14th St., N. W., Washington, D. C.

Feb. 14-16—Ohio Vegetable and Potato Growers Association 41st annual meeting, Hotel Cleveland, Cleveland.—E. C. Wittmeyer, Sec'y, Horticultural Bldg., Columbus 10.

One of the day's highlights was an airplane spraying demonstration on a small field of snap beans. The plane was equipped with wind-driven pump and some 16 low-gallonage nozzles mounted on the undersides of the wings, applying from 1 to 5 gallons of spray per acre.—Chesley Hines, Ext. Hort., State College.

Reducing Potato Grade Defects

OHIO—Potato growers attending the annual Wayne County Potato Field Day August 17 headed home feeling as if they'd been given real cash—instead of ideas.

The entire program at Ramseyer Farms, Smithville, was aimed at helping growers reduce grade defects through better harvesting and handling methods. On hand was A. H. Glaves, senior agricultural engineer at the USDA Research Center, East Grand Forks, Minn., who showed the growers how to use various pieces of harvesting equipment most efficiently.

William Case, executive director of the National Potato Council, summarized the national potato situation. The day's program concluded with a tour of potato farms in the Smithville area. The meeting was sponsored by Wayne County Potato Growers Association, of which Ivan Moomaw is president, and the state extension service.

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E GROWER

Higher Yields with Anhydrous Ammonia

(Continued from page 5)

ammonia is applied deep in the soil a deeper root system is encouraged.

Even in dry soil there is still sufficient moisture for the ammonia to be adsorbed and for the plants to utilize the nitrogen. However, anhydrous ammonia is not a substitute for moisture.

Ammonia is made by taking nitrogen from the air and combining it with hydrogen. This gas is compressed to a liquid and handled in that form. The distribution and sale to growers requires a bulk storage station within a reasonable trucking distance. It is hauled in various sizes of cylinders and tanks. For eastern conditions, the best method is to use a 1,000-gallon tank mounted on a trailer. The grower pays according to the weight of ammonia used—one gallon weighs about 5 pounds and contains approximately 4 pounds of nitrogen.

Depth of Application

Ammonia is usually placed about 5 to 6 inches below the soil surface. Some growers are applying ammonia by subsoiling methods to a depth of 18 or more inches.

Most anhydrous ammonia applicators have narrow steel blades that ride through the soil with a minimum of disturbance. A metal tube is welded to the back of each blade. The end of the tube is plugged and drilled so the ammonia is released laterally at the bottom of the blade.

Ammonia combines with the clay particles of the soil to form a water-insoluble "ammonia-clay." In an air-dry soil this reaction is complete in less than a minute, and the ammonia diffuses or spreads farther from the line of application because dry soils are more porous. In moist soils, the reaction with the clay may take from two to five minutes. The diameter of the zone in which the

ammonia spreads is only about 3 to 5 inches, making this an area of high nitrogen concentration.

Time of Application

The application of anhydrous ammonia is a tillage operation, and, all factors considered, when a soil is in optimum or best condition for tillage it is also in best condition for applying anhydrous ammonia.

While anhydrous ammonia can be applied in the fall, or as a pre-plant application in the spring, the time when the nitrogen requirements of the crop are the highest must be considered. This may make side-dressing during the growing season the best time to apply it.

Because the plant response is slower than from the application of nitrates, it should be applied from a week to 10 days earlier. This will have certain advantages since the earlier it is sidedressed, the less root pruning will occur.

Crops such as tomatoes, which may have developed large spreading branches, will require special equipment such as vine lifters to prevent plant injury when ammonia is applied.

Use on Cover Crops

Anhydrous ammonia can be applied to the growing cover crop or at the time of plowing down. For growers who apply most of their fertilizer just prior to planting, it is easily substituted for the major part of the nitrogen requirements for the crop concerned.

Tests on beets growing in sandy loam soil in southern New Jersey showed that table beet seedlings less than one month old had adsorbed nitrogen applied 10 days earlier as anhydrous ammonia. The rows were 30 inches apart and the application

(Continued on page 17)

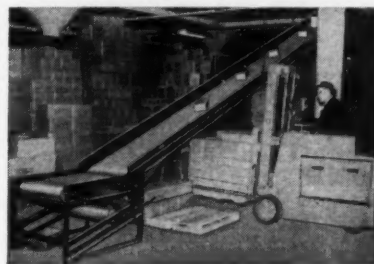


NEW HYDROCOOLER COOLS CROPS IN THE FIELD

This self-contained, mobile hydrocooler, designed and built by Durand Manufacturing Co., Woodbury, Ga., is ready to operate immediately upon reaching location, when ice and water are added. The new unit is unique in that it does not have to be disassembled when transported. Pump and conveyor are operated by the same engine.

The hydrocooler can be purchased with any size of trailer. The first unit has been purchased by Morris April Bros., Bridgeton, N.J., for use on their line of vegetables which includes lettuce, sweet corn, asparagus, tomatoes, onions, beans, and cabbage. They are currently using it to cool lettuce on the Graves Farms at Cedarville, N.J.

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Stone Clearing

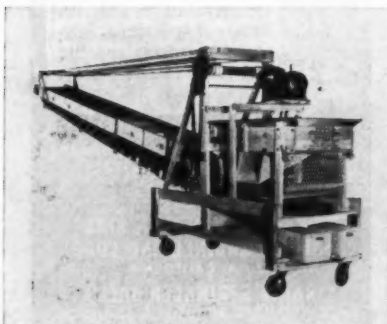
Albert Aldo, a well-known vegetable grower in Bridgeport, Conn., showed us how he clears his land of stones. The machine he uses does a splendid job and quickly pays for itself. Known as the Pixtone, the machine clears stones from 1½ to 8 inches in diameter. The machine is easily pulled by a tractor, truck or jeep and operates until the hopper is filled with mechanically picked stones. The machine in actual tests will do the work of eight men in one day. Made entirely of steel, the Pixtone is built to last. Here is a machine which we know goes a long way toward reducing labor costs. (See photos below.)

The Old Way ---



When writing manufacturers
be sure to mention
AMERICAN VEGETABLE GROWER

High Profit Graders for Every Job



16

Steve Marcucio, a large vegetable grower in North Branford, Conn., has this to say about the machine: "I have been using a Pixtone picker for 5 years, doing picking on our own vegetable farm as well as custom work, which pays very well. Now we can work our farm in pleasure—no broken plow points or loose disk on the wheel harrow. The machine has paid for itself in savings on other repairs. Words cannot tell what a demonstration can do better. That's how I convinced myself to buy one."

If you have a stone problem, get the latest information on this remarkable machine. Just write H. M. Ellsworth, Bridgeport Implement Works, 1483 Stratford Ave., Stratford, Conn.

--- The New Way

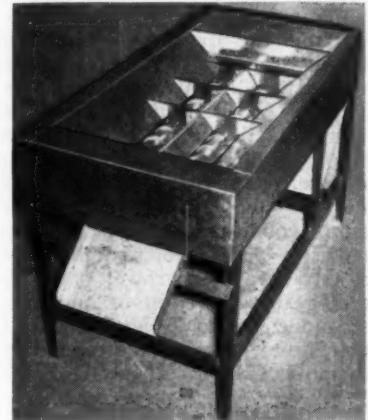


On-the-Spot Sterilization with Portable Boiler

How many times we growers have wanted a machine capable of sterilizing seed beds or even soil. To do this meant the installation of steam pipes to the area—which was costly and, at

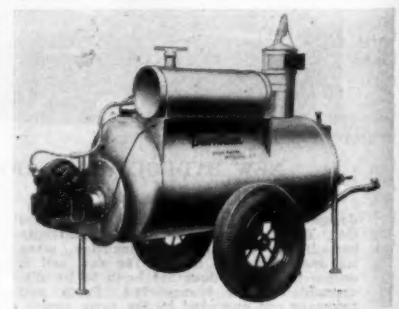
best, inefficient. Now a famous maker of greenhouses has developed a portable steam boiler at low cost. This machine will perform many necessary jobs, such as emergency heating, cleaning equipment, etc. Write Ernest Chabot at Lord & Burnham Division, Irvington-on-Hudson, N. Y.

Top Radish Prices



Radish growers in the Middle West are having splendid success using a new Hi-Speed serrated blade type cutter. The machine cuts 20 to 30 bushels an hour, and the topper is adjustable from 0 to ¼ inch. The machine is compact, yet weighs only 150 pounds. Designed to meet the demands of today's markets, growers who own the machine are reporting higher prices. Furthermore, they say that their radishes stay fresh longer. Easy to operate, only one man is needed. The radish topper is made by the R & Z Manufacturing Co., Box 243, Oshkosh, Wis. Why not write them—they will be glad to give you all of the facts.

best, inefficient. Now a famous maker of greenhouses has developed a portable steam boiler at low cost. This machine will perform many necessary jobs, such as emergency heating, cleaning equipment, etc. Write Ernest Chabot at Lord & Burnham Division, Irvington-on-Hudson, N. Y.



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SEPTEMBER,

Anhydrous Ammonia

(Continued from page 15)

was made in the center of the row to a depth of 6 inches.

Potatoes, contrasted with corn, have limited root systems. Hence, it would appear that the ammonia should be placed close to the seed piece at planting time or shortly after.

With corn, however, ammonia may be applied as a pre-plant application, or in bands anytime prior to tasseling. Since vegetable crops are usually planted in closely spaced rows, ammonia, in most cases, can be applied pre-plant, either under the rows or as side-application with the blades passing down the middles between the rows.

When ammonia is applied well ahead of the crop's nitrogen requirements, the soil holds it in what might be considered cold storage, gradually metering nitrogen out to the plants at the rate most crops require it. This is true because as the soil temperature increases, there is greater activity of the soil organisms which change ammonia to

POTATO YEARBOOK

The American Potato Yearbook for 1955, a good reference guide for growers and others interested in potatoes, is now available. Statistical information on seed and table stock production is included in the 84-page booklet together with other reference material. A new feature is the onion supplement which contains a list of recently published articles on onions. The leading onion producing areas are also given. Copies of the Yearbook are available from American Potato Yearbook, 8 Elm St., Westfield, N.J., for \$2 each. A complete volume, 1950-1955, is available at \$7.

nitrate, the form generally preferred by maturing plants.

Fortunately this period parallels the time of maximum growth and highest nitrogen requirements of most of the vegetable crops. Thus the major portion of a crop's nitrogen requirements may be applied as ammonia either ahead of planting (pre-plant) or shortly after.

It has been true generally that in order to achieve the highest quality of fresh vegetables, a very close check on the nitrogen status of crops is essential. Tissue testing and foliage color are used to determine when it should be added. Growers are finding that small, frequent anhydrous ammonia applications result in premium quality.

Since ammonia is the material from which most of the other nitrogen fertilizers are made, it should always be the most reasonable in price. There is very little labor involved in applying it, which largely offsets cost of equipment. Applicators soon will be mounted on tillage implements; thus a separate operation will be eliminated. THE END

OPPORTUNITY ADS

Only 25c a word for one-time insertion; 20c a word for two-time insertion; 15c a word for four-time insertion—CASH WITH ORDER. Count each initial and whole number as one word. ADDRESS AMERICAN VEGETABLE GROWER, Willoughby, Ohio.

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SPRAYER — DUPLEX HARDIE SPECIAL, practically new, 100 gallon tank, 800 pound pressure pump, gun and hose. BEN CAHOW ESTATE, Reading, Michigan, 173-M.

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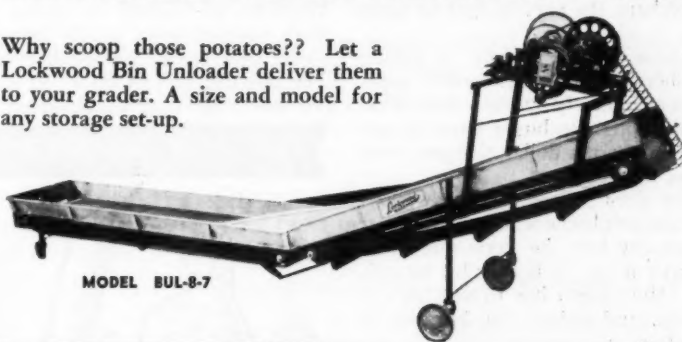
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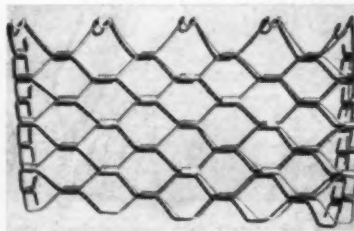
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An Effective Bargaining Tool for Growers

THERE seems to be an urgency among vegetable growers for more accurate market information. Advance crop estimates of production in the various growing areas of the country are useful but inadequate. Growers want to know the growing conditions in other areas week by week throughout the season, also market conditions on various vegetable items in the major markets. But most of all, they want accurate information on prices.

Some of this information is now available to growers, but many do not know where to get it. It is often necessary for a grower to gather information from several different sources and then analyze it for himself.

Is it possible that this function could be done by one group or one agency having the sole purpose of assembling all the data possible on growing conditions in supply areas, demand and price conditions in various markets, analyzing the information, and disseminating the facts to growers?

Our Federal Market News Service goes a long way, but many growers feel that it is not as complete and informative as is needed in today's highly competitive markets.

Vegetables are highly perishable and will not wait long for an improvement in market prices. They either spoil or are sold. This is the problem that faces practically all growers, except perhaps the very largest in some areas.

Suppose grower Smith is selling cucumbers to his regular outlet, moving his crop nicely and at a fair price. One morning his buyer says he can buy cucumbers a dollar cheaper from another area.

What does grower Smith do? Often he doesn't know whether the buyer can actually buy the same quality at a cheaper price. It is only his buyer's word. But Smith has to sell his cucumbers, and today. So, he takes a dollar less.

Multiply this a hundredfold when demand is down a little and you see what happens to the price of cucumbers. Growers go broke. Some stay in and some go out the next year. That is part of our competitive economy.

Some way is needed for growers to get the necessary information that will lessen the violent price fluctua-

tions they now experience, or endure. Droughts, freezes and floods change production pictures overnight sometimes, but the effects on the market should be less violent for the benefit of all concerned.

There is a paramount need for more accurate and dependable market information for growers' use in order to help ease this problem. Vegetable growers in every area seem to be in a dilemma over the poor price structure of their commodities.

We suggest that growers' organizations get behind this problem, find some of its causes, work out some detailed programs, and give them a try. We like the independent spirit of vegetable growers, we like to see them tackle their problems systematically and courageously. Merely complaining about markets won't improve the price picture.

Make Them a Special Product

POTATO growers who are resorting to the practice of vine-killing to reduce their 1955 yield, in the face of the prospective 50 million bushel surplus, can take heart in the fact that the potatoes they do produce will be of better quality.

And "the grower with the highest quality potatoes will be able to sell them easier and is less likely to find them in the surplus pile," is the encouraging comment of Prof. M. W. Meadows of Cornell in urging New York state growers to kill their vines about two weeks before harvesting. The possible loss of 20 to 40 bushels per acre that may result from such

practice will be more than compensated by a better quality potato, he states.

Five reasons why a grower should kill his vines preferably by using both chemicals and a mechanical shredder are listed by Meadows as follows:

1) Vines should be removed to permit easier digging. 2) Destruction of the vines will reduce the percentage of oversize potatoes which are too large for U. S. Grade No. 1. 3) Virus diseases are transmitted through the vines. 4) Killing the vines will hasten the potato's maturity, causing the skin to harden so it won't peel off in harvesting. 5) Late blight, a fungus disease, thrives on green vines and infects the potatoes. Killing the vine cuts off the disease's food supply.

The combination use of chemicals and machines in vine killing has been deemed best, says Meadows, because the chemicals will kill the vine and the machines will chop it up so that harvesting is easier.

The stage of potato growth at which the vines are killed determines the amount by which yields are reduced by vine-killing, reports the USDA. The results of three-year tests in co-operation with the Maine Agricultural Experiment Station indicate that vine killing about August 25 will reduce the output of potato fields in Maine an average of 25 per cent compared with the production possible if vines are not destroyed until September 18. For the eight varieties tested during the three years of the experiments, solids content (a rough measure of cooking quality) was reduced on the average less than 3 per cent as a result of vine-killing as early as August 25.

Quality potatoes, washed and waxed and attractively packaged, have consumer appeal. We urge you to re-read the article "From Spuds to Potatoes" in the August issue of AMERICAN VEGETABLE GROWER. As pointed out in the article, graded and packed to suit the customer's needs, potatoes aren't spuds any more—they're a special product.

A special product isn't likely to become a surplus product.

Coming Next Month

- How to Grow Bibb Lettuce
- Choose the Right Cover Crop
- Grower-Canner Relations—Two Points of View
- Growing Sweetpotatoes in the Midwest
- There's a Demand Now for Little Egypt Cucumbers

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